

In the Claims:

Please amend the claims as follows:

1-4 (cancelled)

5. (currently amended) A method for voltage stabilization of an electrical power network system comprising a producing power network system side, side and a consuming power network side comprising a power load a transformer, a power transmission line with an impedance  $Z_{LN}$  connected to a primary side of the transformer, a transformer a power load connected to a secondary side of the transformer, and an on-line tap changer added to the transformer, wherein a transformer ratio n is controlled through the on-line tap changer trying to keep the voltage  $V_2$  on the secondary side of the transformer at a voltage reference  $V_{ref}$ , the method comprising:

measuring the impedance of the line in case of dynamic instabilities; and  
changing the controlling a transformer ratio n by changing a voltage reference  $V_{ref}$  of the on-line tap changer, wherein the voltage reference is changed according to a feed forward compensation from the impedance of the line.

6. (previously presented) The method according to claim 5, wherein the feed forward compensation drives the power network system to a stable equilibrium point in a stable region, and wherein the stable region lies below a loci for maximum power transfer  $n^2Y_{LD}Z_{LN}=1$ , where  $Y_{LD}$  is power load admittance,  $Z_{LN}$  is transmission line impedance and  $n$  is the transformer ratio.

7. (previously presented) The method according to claim 5, wherein the feed forward compensation is provided by a first order filter  $H_{ff}(s)=sT_d/(sT + 1)$ , where  $T$  and  $T_d$  are tuning parameters.

8. (previously presented) The method according to claim 5, wherein a feedback controller is provided according to an equation  $V_{fb}=-\max(0,a(n^2Y_{LD}-1/Z_{LN}))$ , where  $n$  is the transformer ratio,  $Y_{LD}$  is power load admittance,  $Z_{LN}$  is transmission line impedance and  $a$  is a tuning parameter that is influencing a region of attraction of an equilibrium point.